

On shrikes and shrews

In August 1988 an unidentified species of shrike (Laniidae) was sighted in central Somalia (Smith *et al.*, 1991). The bird was subsequently captured, and while in captivity was studied, photographed, videotaped and its sounds recorded, before being released. The type material comprises moulted feathers, blood samples and DNA extracted from feather quills. For comparison, DNA from other individuals was obtained from old museum skins and from three live birds. From this data the species was named, 'to emphasize that the bird is described on the basis of a freed individual', *Laniarius liberatus*. The procedure used 'confirms that, in situations where collecting is not desirable, tissue from live individuals can be used to define taxa, and for comparisons with DNA from museum specimens of other taxa'.

In November 1987 members of the Tanzanian–Belgian Rodent Project discovered in southern Tanzania a new species of shrew (Soricidae) unknown to science (Hutterer *et al.*, 1991). Despite the fact that it has subsequently been named *Crocidura desperata*, 'to point out the desperate situation of the new species', the authors state that, in marked contrast to the responsible behaviour of their colleagues in Somalia, two specimens of this shrew were actually collected. They go on to say that the new species's survival is 'entirely dependent on the preservation of the few remnant forests that still exist in that part of Africa'. May I suggest that its survival is no less dependent on the behaviour of scientists, some of whom unnecessarily kill an 'endangered' species simply in order to identify it. If scientists act in this irresponsible and wasteful manner, what hope is there of convincing laypeople of the value of conserving wildlife?

References

- Hutterer, R., Jenkins, P.D. and Verheyen, W.N. 1991. A new forest shrew from southern Tanzania. *Oryx*, 25, 165–168.
 Smith, E.F.G., Arctander, P., Fjeldså, J. and Amir, O.G. 1991. A new species of shrike (Laniidae:

Laniarius) from Somalia, verified by DNA sequence data from the only known individual. *Ibis*, 133, 227–235.

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It is unfortunate that Mr Lever's accusation of irresponsible behaviour contains misconceptions, which may cause unnecessary confusion among people who share the intention of contributing to nature conservation. However, since the only way to better understand these problems is through responsible and reliable information, I would like to share the following ideas.

It is the task of professional biologists to study the diversity of animals and plants of our planet, to describe, name and catalogue the millions of species. In this manner, they provide the basic data for later application in identification keys, books, field guides, conservation plans, and all the popular media used and consumed by laypeople all over the world. To obtain the primary information, collection of specimens is often required, as is the subsequent deposition of voucher specimens in institutional collections for successive researchers. It is self-evident that only the necessary number of specimens should be taken, and that researchers should respect human ethics as well as existing laws and traditions. However, it is also necessary to consider the position of a species in the ecosystem.

An African shrike, for example, is a predator and lives on insects, small reptiles, nestlings and eggs of birds, and small mammals such as rodents and shrews. Two eggs are usually laid by the female, meaning that the production of offspring is low. The bird has a life expectancy of several years. A shrew, in contrast, has a shorter life span, often less than 1 year. A female gives birth to 3–14 young several times a year, depending on species and latitude. The majority of offspring produced play the ecologically important role of being eaten by predators, including, possibly, shrikes on occasion. It is important to note that the collection of many long-lived individuals of low-density species could possibly affect a local population. On the other

hand, the collection of a few short-lived individuals of high-density species should not have a negative effect on a population. If the habitat of any species is destroyed, however, it will necessarily disappear from that spot, and if the species is confined to the habitat under destruction, it will vanish for ever.

In the case of the shrew *Crocidura desperata*, it is the extremely endangered, relict forest in southern Tanzania about which we should be concerned, not the first two specimens ever collected by biologists. (To clarify the point for the record, the discovery that the specimens represented a new species occurred only 2 years later in the laboratory. Such cryptic mammals cannot be properly identified in the hand alive.) In this particular case and in many others, the preservation of the habitat is the only measure that makes any ecological sense. We decided to announce the discovery of this new species in a conservation journal such as *Oryx* as an example of the many small mammals that are described each year from the tropics but rarely receive any attention from the public, although they add considerably to the vertebrate diversity of the threatened forests.

In my view Mr Lever has glorified the recent description of the shrike, *Laniarius liberatus*, too much. One should bear in mind that the authors were able to analyse, in a comparative manner, the tissues obtained from the single bird, which was later released, by making use of existing bird collections in research museums. Therefore, their procedure should be recognized as an exceptional case and not considered to be a model. Also, they presented no evidence that the shrike, released in Somalia after 14 months of captivity and a shuttle to Germany, survived and reproduced in the new, unfamiliar habitat. Finally, the reproduction of an individual is the only aspect of its biology that is really important for the survival of a species.

It is my impression that the philosophical problems involved in nature conservation and the collection of scientific specimens have not yet been properly addressed. Nevertheless their discussion in a scientific (rather than in a solely moralistic) context is needed in order to

evolve toward an understanding of how best to preserve our flora and fauna.

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Romer's tree frog and Hong Kong airport

The sources of the short item entitled 'Endemic tree frog at risk' (*Oryx*, 25, 192) seem to imply that the island of Chek Lap Kok, which is to be razed by the airport scheme, is an area of major ecological importance with '... freshwater marshes, excellent mangrove swamps, and habitats for 32 terrestrial vertebrate species.' Nothing could be further from the truth, as Chek Lap Kok has a long history of human impact and the two mangroves are postage-stamp size. Moreover, most of the vertebrates are birds, which are able to disperse to other, less-impacted areas. The value of Chek Lap Kok lies, as your article points out, in the presence of Romer's tree frog, which is found on only two other islands (both considerably larger than Chek Lap Kok). The good news is that since your article was published the Royal Hong Kong Jockey Club Charities have given Hong Kong University \$HK470,000 to research the biology of Romer's tree frog and its associated wetland habitat, with the aim of producing a conservation and management plan for the frog. The money will be used to fund a Ph.D. student (Michael Lau) who will undertake the project under my supervision. The bad news is that the Port and Airport Development Scheme is one of the biggest (if not the biggest) and most expensive (estimated \$HK127 billion) civil engineering projects ever undertaken anywhere in the world; the Hong Kong government has not yet provided any money for ecological mitigation, despite the fact that site work has started. We are pleased that the Jockey Club has provided money for research on Romer's tree frog, but disturbed that a charity must fill this breach when the responsibility lies with the government.

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